

Read and understand this manual before using machine.

# **HOLLOW CHISEL MORTISER**

**Model Number** 25200





STEEL CITY TOOL WORKS **VER. 2.07** 

Manual Part No. OR71593



THANK YOU for purchasing your new Steel City
Hollow Chisel Mortiser. This mortiser has been designed,
tested, and inspected with you, the customer, in mind. When
properly assembled, used and maintained, your mortiser will
provide you with years of trouble free service, which is why
it is backed by one of the longest machinery warranties in the
business.

This mortiser is just one of many products in the Steel City's family of woodworking machinery and is proof of our commitment to total customer satisfaction.

At Steel City we continue to strive for excellence each and every day and value the opinion of you, our customer. For comments about your mortiser or Steel City Tool Works, please visit our web site at www.steelcitytoolworks.com .

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## **INTRODUCTION**

This user manual is intended for use by anyone working with this machine. It should be kept available for immediate reference so that all operations can be performed with maximum efficiency and safety. Do not attempt to perform maintenance or operate this machine until you have read and understand the information contained in this manual.

The drawings, illustrations, photographs, and specifications in this user manual represent your machine at time of print. However, changes may be made to your machine or this manual at any time with no obligation to Steel City Tool Works.

## WARRANTY

# STEEL CITY TOOL WORKS 5 YEAR LIMITED WARRANTY

Steel City Tool Works, LLC ("SCTW") warrants all "STEEL CITY TOOL WORKS" machinery to be free of defects in workmanship and materials for a period of 5 years from the date of the original retail purchase by the original owner. (Granite components are warranted for 10 years. Please inform SCTW within 30 days for any damages or defects on the Granite components found upon receipt of the products to qualify for the 10 year limited warranty. See the Granite warranty statement supplied with those products.) SCTW will repair or replace, at its expense and at its option, any SCTW machine, machine part, or machine accessory which in normal use has proven to be defective, provided that the customer returns the product, shipping prepaid, to an authorized service center with proof of purchase and provides SCTW with a reasonable opportunity to verify the alleged defect by inspection. Date code, which can be found on the original carton and machine body, must be provided to SCTW at the time of any warranty request made. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, or lack of maintenance, or to unauthorized repairs or alterations made or specifically authorized by anyone other than SCTW. Normal wear components are also excluded under this coverage. Every effort has been made to ensure that all SCTW machinery meets the highest quality and durability standards. We reserve the right to change specifications at any time due to our commitment to continuous improvement of the quality of our products.

EXCEPT AS SET FORTH ABOVE, SCTW MAKES NO EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO ITS MACHINERY, OR ITS CONDITION, MERCHANT-ABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE. SCTW FURNISHES THE ABOVE WARRANTIES IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY SPECIFICALLY DISCLAIMED.

SCTW SHALL NOT BE LIABLE FOR ANY (A) SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF PROFITS, ARISING FROM OR RELATED TO THIS WARRANTY, THE BREACH OF ANY AGREEMENT OR WARRANTY, OR THE OPERATION OR USE OF ITS MACHINERY, INCLUDING WITHOUT LIMITATION DAMAGES ARISING FROM DAMAGE TO FIXTURES, TOOLS, EQUIPMENT, PARTS OR MATERIALS, DIRECT OR INDIRECT LOSS CAUSED BY ANY OTHER PARTY, LOSS OF REVENUE OR PROFITS, FINANCING OR INTEREST CHARGES, AND CLAIMS BY ANY THIRD PERSON, WHETHER OR NOT NOTICE OF SUCH POSSIBLE DAMAGES HAS BEEN GIVEN TO SCTW; (B) DAMAGES OF ANY KIND FOR ANY DELAY BY OR FAILURE OF SCTW TO PERFORM ITS OBLIGATIONS UNDER THIS AGREEMENT; OR (C) CLAIMS MADE A SUBJECT OF A LEGAL PROCEEDING AGAINST SCTW MORE THAN ONE (1) YEAR AFTER SUCH CAUSE OF ACTION FIRST AROSE.

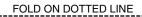
The validity, construction and performance of this Warranty and any sale of machinery by SCTW shall be governed by the laws of the Commonwealth of Pennsylvania, without regard to conflicts of laws provisions of any jurisdiction. Any action related in any way to any alleged or actual offer, acceptance or sale by SCTW, or any claim related to the performance of any agreement including without limitation this Warranty, shall take place in the federal or state courts in Allegheny County, Pennsylvania.

STEEL CITY TOOL WORKS

Tech Service
1-877-724-8665
Please have your Model No.
and Serial No. available

# **WARRANTY CARD**

	ne	8.	How would you rank your w	<u> </u>
	eet		Simple	Intermediate
	No		Advance	Master Craftsman
City	State Zip			
	ne Number	9.	How many Steel City machi	nes do you own?
i-N	lail	10	Mhat atationam, waadwarkin	a to alo do vou oveno
)ro	dust Description:	10.	What stationary woodworkin Check all that apply.	g tools do you own?
	duct Description:		Air Compressor	Band Saw
	del No.:		Drill Press	Drum Sander
ы	al No		Dust Collection	Horizontal Boring Machin
The	o following information is given on a voluntary basis		Jointer	Lathe
	e following information is given on a voluntary basis I is strictly confidential.		Mortiser	Panel Saw
,,,,	no othoty commental.		Planer	Power Feeder
i	Where did you purchase your STEEL CITY machine?		Radial Arm Saw	Shaper
•				
	Store:		Spindle Sander	Table Saw
	City:		Vacuum Veneer Press	Wide Belt Sander
	How did you first learn of Steel City Tool Works?		Other	
•	How did you first learn of Steel City Tool Works?  Advertisement Mail Order Catalog	11	Which benchtop tools do yo	u own? <i>Check all that apply</i>
	Web Site Friend	11.	Belt Sander	Belt / Disc Sander
	Local Store Other		Drill Press	Bent / Disc Sander Band Saw
	LOCAI SICIE OTITEI		Grinder	Mini Jointer
	NA/high of the fellowing group in a de very subscribe to 0			
	Which of the following magazines do you subscribe to?		Mini Lathe	Scroll Saw
	American Woodworker American How-To		Spindle / Belt Sander	Other
	— Cabinetmaker Family Handyman			
	Fine Homebuilding Fine Woodworking	12.	Which portable / hand held	oower tools do you own?
	Journal of Light Construction Old House Journal		Check all that apply.	B
	Popular Mechanics Popular Science		Belt Sander	Biscuit Jointer
	Popular Woodworking Today's Homeowner		Dust Collector	Circular Saw
	WOOD Woodcraft		Detail Sander	Drill / Driver
	WOODEN Boat Woodshop News		Miter Saw	Orbital Sander
	Woodsmith Woodwork		Palm Sander	Portable Thickness Planer
	Woodworker Woodworker's Journal		Saber Saw	Reciprocating Saw
	Workbench Other		Router	Other
	Which of the following woodworking / remodeling shows do you watch?	13.	What machines / accessories	s would you like to see added to t
	Backyard America The American Woodworker			
	Home Time The New Yankee Workshop			
	This Old House Woodwright's Shop			
	Other	14.	What new accessories woul	d you like to see added?
	Outoi			
	What is your annual household income?			
	\$20,000 to \$29,999 \$30,000 to \$39,999			
	\$40,000 to \$49,999   \$50,000 to \$59,999	15.	Do you think your purchase	represents good value?
	\$60,000 to \$69,999     70,000 to \$79,999		Yes No	-
	\$80,000 to \$89,999    \$90,000 +			
	ψου,ουυ το ψου,ουυ = ψου,ουυ =	16	Would you recommend STF	EL CITY products to a friend?
	What is your age group?	. 3.	Yes No	p
	What is your age group?			
	20 to 29 years 30 to 39 years	17	Comments:	
	40 to 49 years 50 to 59 years	17.	Comments.	
	60 to 69 years 70 + years			
,	How long have you have a manadissipped			
•	How long have you been a woodworker?			
	0 to 2 years 2 to 8 years			



PLACE STAMP HERE

## Steel City Tool Works P.O. Box 10529 Murfreesboro, TN 37129

FOLD ON DOTTED LINE

## **PRODUCT SPECIFICATIONS**

PRODUCT DIMENSIONS

Type	Induction	Maximum stroke	5"
Continuous duty HP	1/2 HP	Chisel center to fence	4"
Amps	5.6	Under hold down	1" x 4-1/4"
Volts	120	Fence size	14-1/2"x 3"
Hertz	60	Base size (without extensions)	17"x 15"
TIETIZ	00	Base size (with extensions)	17" x 35"
RPM	1725 RPM	,	

Chuck type Keyed OVERALL DIMEN

Chuck maximum capacity

Neyed

OVERALL DIMENSIONS

Height

30-1/2"

Chisel sizes 1/4"x 1/4" Width 15" 5/16"x 5/16" Depth 17" 1/2"x 1/2"

Weight 81 lbs. Micro-adjust Yes

Bit holder Yes SHIPPING DIMENSIONS

Handle position

Left or right
(interchangeable)

Carton type

Box

Length

19-3/4"

Height 17-1/2"

16-1/2"

Gross weight 88 lbs.

## **ACCESSORIES AND ATTACHMENTS**

Width

There are a variety of accessories available for your Steel City Product. For more information on any accessories associated with this and other machines, please contact your nearest Steel City distributor, or visit our website at: **www.steelcitytoolworks.com**.

## **DEFINITION OF TERMS**

**Blind Mortise** - Joint where the mortise does not go all the way through the stock.

**Chipout** - Breakage on the exit side of a through mortise.

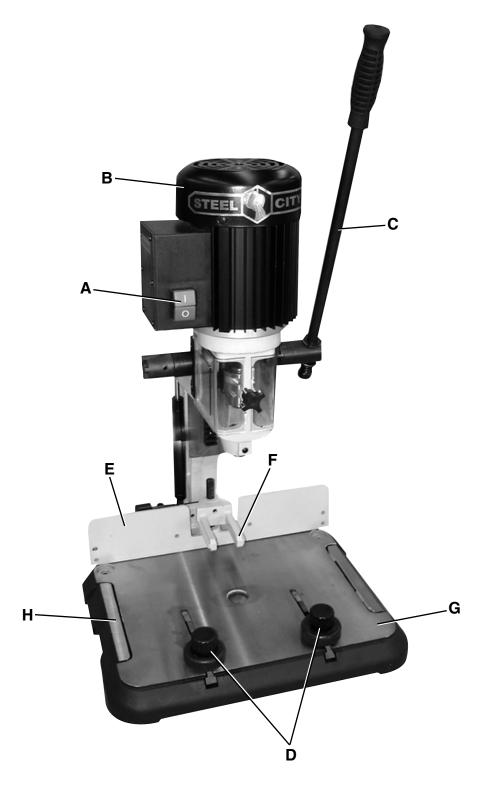
**Corner Mortise** - Commonly used for frame and panel sections such as raised panel cabinet doors.

**Micro Adjust** - Assembly which allows the fence to be moved in or out in very small increments.

**Tenon** - A projection on the end of a workpiece that is inserted into a mortise.

**Through Mortise** - Joint where the mortise goes completely through the workpiece, allowing the end of the tenon to be exposed.

# FEATURE IDENTIFICATION



- A) Switch
- B) Motor housing
- C) Raise/Lower handle
- D) Stock rollers

- E) Fence
- F) Hold down
- G) Base/Worktable
- H) Extension wings

## **GENERAL SAFETY**

#### **▲** WARNING

**TO AVOID** serious injury and damage to the machine, read and follow all Safety and Operating Instructions before assembling and operating this machine.

This manual is not totally comprehensive. It does not and can not convey every possible safety and operational problem which may arise while using this machine. The manual will cover many of the basic and specific safety procedures needed in an industrial environment.

All federal and state laws and any regulations having jurisdiction covering the safety requirements for use of this machine take precedence over the statements in this manual. Users of this machine must adhere to all such regulations.

Below is a list of symbols that are used to attract your attention to possible dangerous conditions.



This is the international safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

#### **A** DANGER

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

#### **A** WARNING

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

#### **▲** CAUTION

Indicates a potentially hazardous situation, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

#### CAUTION

**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

#### NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

#### **A** WARNING



Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. The dust may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are:

- · Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

 To avoid serious injury and damage to the machine, read the entire User Manual before assembly and operation of this machine.

#### **A** WARNING



 ALWAYS wear eye protection. Any machine can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are NOT safety glasses. ALWAYS wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.

#### **A** WARNING



 ALWAYS wear hearing protection. Plain cotton is not an acceptable protective device. Hearing equipment should comply with ANSI S3.19 Standards.

#### **A** WARNING



- ALWAYS wear a NIOSH/OSHA approved dust mask to prevent inhaling dangerous dust or airborne particles.
- ALWAYS keep the work area clean, well lit, and organized. DO NOT work in an area that has slippery floor surfaces from debris, grease, and wax.
- 6. **ALWAYS** unplug the machine from the electrical receptacle before making adjustments, changing parts or performing any maintenance.
- AVOID ACCIDENTAL STARTING. Make sure that the power switch is in the "OFF" position before plugging in the power cord to the electrical receptacle.

#### **A** WARNING



8. **AVOID** a dangerous working environment. **DO NOT** use electrical tools in a damp environment or expose them to rain or moisture.

#### **A** WARNING



- CHILDPROOF THE WORKSHOP AREA by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks.
- 10. **DO NOT** use electrical tools in the presence of flammable liquids or gasses.

- 11. **DO NOT FORCE** the machine to perform an operation for which it was not designed. It will do a safer and higher quality job by only performing operations for which the machine was intended.
- 12. **DO NOT** stand on a machine. Serious injury could result if it tips over or you accidentally contact any moving part.
- 13. **DO NOT** store anything above or near the machine.
- 14. **DO NOT** operate any machine or tool if under the influence of drugs, alcohol, or medication.
- 15. EACH AND EVERY time, check for damaged parts prior to using any machine. Carefully check all guards to see that they operate properly, are not damaged, and perform their intended functions. Check for alignment, binding or breakage of all moving parts. Any guard or other part that is damaged should be immediately repaired or replaced.
- 16. Ground all machines. If any machine is supplied with a 3-prong plug, it must be plugged into a 3contact electrical receptacle. The third prong is used to ground the tool and provide protection against accidental electric shock. **DO NOT** remove the third prong.
- 17. Keep visitors and children away from any machine. **DO NOT** permit people to be in the immediate work area, especially when the machine is operating.
- 18. **KEEP** protective guards in place and in working order.
- 19. **MAINTAIN** your balance. **DO NOT** extend yourself over the tool. Wear oil resistant rubber soled shoes. Keep floor clear of debris, grease, and wax.
- 20. **MAINTAIN** all machines with care. **ALWAYS KEEP** machine clean and in good working order. **KEEP** all blades and tool bits sharp.
- 21. NEVER leave a machine running, unattended. Turn the power switch to the OFF position. DO NOT leave the machine until it has come to a complete stop.
- 22. **REMOVE ALL MAINTENANCE TOOLS** from the immediate area prior to turning the machine ON.
- 23. **SECURE** all work. When it is possible, use clamps or jigs to secure the workpiece. This is safer than attempting to hold the workpiece with your hands.
- 24. STAY ALERT, watch what you are doing, and use common sense when operating any machine. DO NOT operate any machine tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

- 25. **USE ONLY** recommended accessories. Use of incorrect or improper accessories could cause serious injury to the operator and cause damage to the machine. If in doubt, **DO NOT** use it.
- 26. Wear proper clothing, **DO NOT** wear loose clothing, gloves, neckties, or jewelry. These items can get caught in the machine during operations and pull the operator into the moving parts. Users must wear a protective cover on their hair, if the hair is long, to prevent it from contacting any moving parts.
- 27. **SAVE** these instructions and refer to them frequently and use them to instruct other users.

28. Information regarding the safe and proper operation of this tool is also available from the following sources:

Power Tool Institute 1300 Summer Avenue Cleveland, OH 44115-2851 www.powertoolinstitute.org

National Safety Council 1121 Spring Lake Drive Itasca, IL 60143-3201

American National Standards Institute 25West 43rd. St, 4th Floor New York, NY. 10036 ANSI 01.1 Safety Requirements For Woodworking Machines WWW.ANSI.ORG

U.S. Department of Labor Regulations OSHA 1910.213 Regulations WWW.OSHA.GOV

## **PRODUCT SAFETY**

- Serious personal injury may occur if normal safety precautions are overlooked or ignored. Accidents are frequently caused by lack of familiarity or failure to pay attention. Obtain advice from supervisor, instructor, or another qualified individual who is familiar with this machine and its operations.
- Every work area is different. Always consider safety first, as it applies to your work area. Use this machine with respect and caution. Failure to do so could result in serious personal injury and damage to the machine.
- Prevent electrical shock. Follow all electrical and safety codes, including the National Electrical Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.

#### **A** WARNING



- TO REDUCE the risk of electrical shock. DO NOT use this machine outdoors. DO NOT expose to rain or moisture. Store indoors in a dry area.
- STOP using this machine, if at any time you experience difficulties in performing any operation.
   Contact your supervisor, instructor or machine service center immediately.

- Safety decals are on this machine to warn and direct you to how to protect yourself or visitors from personal injury. These decals MUST be maintained so that they are legible. REPLACE decals that are not legible.
- 7. **DO NOT** leave the unit plugged into the electrical outlet. Unplug the unit from the outlet when not in use and before servicing, performing maintenance tasks, or cleaning.
- 8. **ALWAYS** turn the power switch "OFF" before unplugging the mortiser.

#### **A** WARNING



- 9. **DO NOT** handle the plug or mortiser with wet hands.
- 10. USE accessories only recommended by Steel City.
- 11. **DO NOT** pull the mortiser by the power cord. **NEVER** allow the power cord to come in contact with sharp edges, hot surfaces, oil or grease.
- DO NOT unplug the mortiser by pulling on the power cord. ALWAYS grasp the plug, not the cord.
- 13. REPLACE a damaged cord immediately. DO NOT use a damaged cord or plug. DO NOT USE if the mortiser is not operating properly, or has been damaged, left outdoors or has been in contact with water.

- DO NOT use the mortiser as a toy. DO NOT use near or around children.
- 15. ALWAYS WEAR EYE PROTECTION. Any power tool can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are NOT safety glasses. ALWAYS wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.
- 16. Basic precautions should **ALWAYS** be followed when using any power tool.
- DO NOT OPERATE THIS MACHINE until it is assembled and installed according to the instructions.
- 18. **OBTAIN ADVICE FROM YOUR SUPERVISOR**, instructor, or another qualified person if you are not familiar with the operations of this power tool.
- 19. **DO NOT** leave any power tool plugged into the electrical outlet. Unplug it from the outlet when not in use and before servicing and cleaning.
- 20. TO REDUCE THE RISK OF ELECTRICAL SHOCK, do not use outdoors. Do not expose to rain. Store indoors.
- 21. FOLLOW all electrical and safety codes, including the National Electric Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.
- 22. **CONNECT** power tool to a properly grounded outlet only. See grounding instructions.
- 23. **SECURE THE MACHINE TO A SUPPORTING SURFACE**. Vibration can cause the machine to slide, walk, or tip over.
- 24. **NEVER START THE MACHINE** with the drill bit or cutting tool against the workpiece. Loss of control of the workpiece can cause serious injury.
- 25. PROPERLY LOCK THE DRILL BIT OR CUTTING TOOL IN THE UNIT before operating this machine.

- 26. **DO NOT** attempt to mortise material that does not have a flat surface, unless a suitable support is used.
- 27. USE ONLY DRILL BITS, CUTTING TOOLS, OR OTHER ACCESSORIES with shank size recommended in your instruction manual. The wrong size accessory can cause damage to the machine and/or serious injury.
- 28. **USE ONLY DRILL BITS OR CUTTING TOOLS** that are not damaged. Damaged items can cause malfunctions that lead to injuries.
- 29. ALWAYS position the hold-down directly over the workpiece to prevent the workpiece from lifting during operation. Loss of control of the workpiece can cause serious injury.
- 30. TURN THE MACHINE "OFF" AND WAIT FOR THE DRILL BIT AND CUTTING TOOL TO STOP TURNING prior to cleaning the work area, removing debris, or removing or securing work-piece. A moving drill bit or cutting tool can cause serious injury.
- 31. **PROPERLY SUPPORT LONG OR WIDE** workpieces, loss of control of the workpiece can cause severe injury.
- 32. **NEVER PERFORM LAYOUT, ASSEMBLY OR SET-UP WORK** on the table/work area when the machine is running. Serious injury can result.
- 33. **TURN THE MACHINE "OFF"**, disconnect the machine from the power source, and clean the table/work area before leaving the machine.
- 34. **REPLACE** a damaged cord immediately. **DO NOT** use a damaged cord or plug. If the power tool is not operating properly, or has been damaged, left outdoors or has been in contact with water, return it to a Steel City Service Center.
- 35. **SAVE THESE INSTRUCTIONS**. Refer to them frequently and use them to instruct other users.

## **ELECTRICAL REQUIREMENTS**

**TO PREVENT** electrical shock, follow all electrical and safety codes, including the National Electrical Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.

**TO REDUCE** the risk of electrical shock, **DO NOT** use machine outdoors. **DO NOT** expose to rain or moisture. Store indoors in a dry area.

**DO NOT** connect the machine to the power source before you have completed the set up process.

**DO NOT** connect the machine to the power source until instructed to do so.

This motor in this machine is designed to run at 115V.

## **GROUNDING INSTRUCTIONS**

#### **A** WARNING



This machine **MUST BE GROUNDED** while in use to protect the operator from electric shock.

In the event of a malfunction or breakdown, **GROUND-ING** provides the path of least resistance for electric current and reduces the risk of electric shock. This machine is equipped with an electric cord that has an equipment-grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching electrical receptacle that is properly installed and grounded in accordance with **ALL** local codes and ordinances.

If a plug is provided with your machine **DO NOT** modify the plug. If it will not fit your electrical receptacle, have a qualified electrician install the proper connections to meet all electrical codes local and state. All connections must also adhere to all of OSHA mandates.

**IMPROPER ELECTRICAL CONNECTION** of the equipment-grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment-grounding conductor. **DO NOT** connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

#### PLUGS/RECEPTACLES

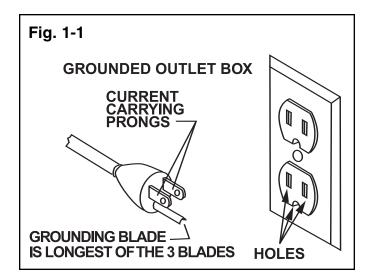
#### **A** WARNING

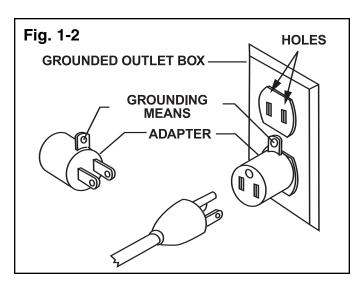


- Electrocution or fire could result if this machine is not grounded properly or if the electrical configuration does not comply with local and state electrical codes.
- MAKE CERTAIN the machine is disconnected from power source before starting any electricall work.
- MAKE SURE the circuit breaker does not exceed the rating of the plug and receptacle.

The motor supplied with your machine is a 115 volt motor. It is shipped wired for 115 volt application. Never connect the green or ground wire to a live terminal.

This tool is intended for use on a circuit that has an electrical receptacle as shown in Figure 1-1. Figure 1-1 shows a NEMA approved 3-wire, 15 amp electrical plug and receptacle that have a grounding conductor. If a properly grounded electrical receptacle is not available, an adapter as shown in Figure 1-2 can be used to temporarily connect this plug to a 2-contact ungrounded receptacle. The adapter has a rigid lug extending from it that MUST be connected to a permanent earth ground, such as a properly grounded receptacle box. THIS ADAPTER IS PROHIBITED IN CANADA.





#### **EXTENSION CORDS**





To reduce the risk of fire or electrical shock, use the proper gauge of extension cord. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw.

The smaller the gauge-number, the larger the diameter of the extension cord is. If in doubt of the proper size of an extension cord, use a shorter and thicker cord. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.

#### **▲** CAUTION

**USE ONLY** a 3-wire extension cord that has a 3-prong grounding plug and a 3-pole receptacle that accepts the machine's plug.

If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.

Make certain the extension cord is properly sized, and in good electrical condition. Always replace a worn or damaged extension cord immediately or have it repaired by a qualified person before using it.

Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)						
115 VOLT OPERATION ONLY						
	25' LONG 50' LONG 100' LONG					
0 to 6 Amps	18 AWG	16 AWG	16 AWG			
6 to 10 Amps	18 AWG	16 AWG	Not recommended			
10 to 12 Amps	16 AWG	16 AWG	Not recommended			

## **UNPACKING & INVENTORY**

#### CHECKING CONTENTS

This mortiser will require some amount of assembly.

Remove all protective materials and coatings from the parts. The protective coatings can be removed by spraying WD-40 on a part and wiping it off with a soft cloth. This may need to be redone several times before all of the protective coatings are removed completely.

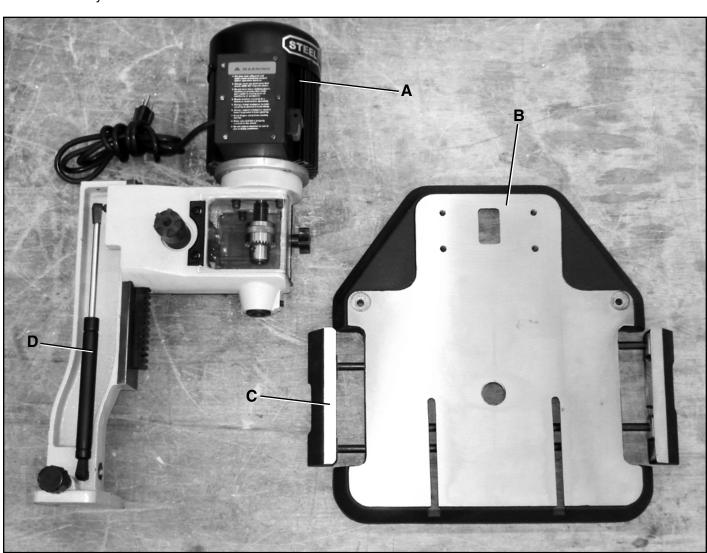
**CAUTION: DO NOT** use acetone, gasoline or lacquer thinner to remove any protective coatings.

After cleaning, apply a good quality paste wax to any unpainted surfaces. Make sure to buff out the wax before assembly.

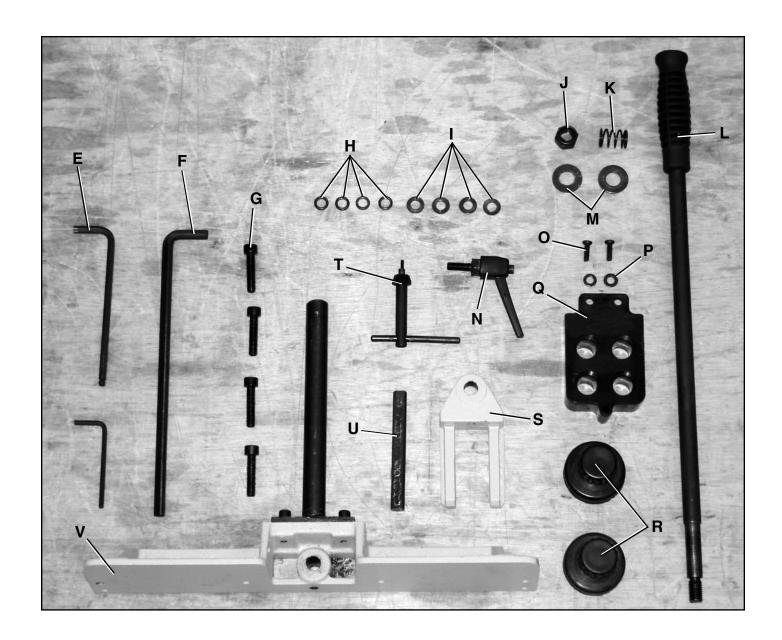
Remove all of the parts from the shipping box and lay them on a clean work surface. Compare the items to inventory figures and verify that all items are accounted for before discarding the shipping box.

#### **A** WARNING

To avoid serious injury, do not attempt to plug in the power cord and turn "ON" the mortiser if any parts are missing. The mortiser should only be turned "ON" after all the parts have been obtained and installed correctly. For missing parts, contact Steel City at 1-877-SC4-TOOL.



- A) Mortiser
- B) Base
- C) Extension Wings (2)
- D) Stabilizer



- E) Hex wrench (2)
- F) Depth stop rod
- G) M8 x 35mm hex socket head screw (4)
- H) M8 lock washer (4)
- I) M8 flat washer (4)
- J) M12 Handle lock nut
- K) Handle spring
- L) Handle
- M) M12 flat washer (2)

- N) Fence lock handle
- O) M5 x 12mm pan head screw (2)
- P) M5 flat washer (2)
- Q) Chisel holder
- R) Stock rollers
- S) Holddown
- T) Chuck key
- U) Guide rod
- V) Fence

#### **ASSEMBLY**

#### **A** WARNING

- 1. **DO NOT** assemble the Mortiser until you are sure the tool is disconnected from the power source.
- 2. **DO NOT** assemble the Mortiser until you are sure the power switch is in the off position.

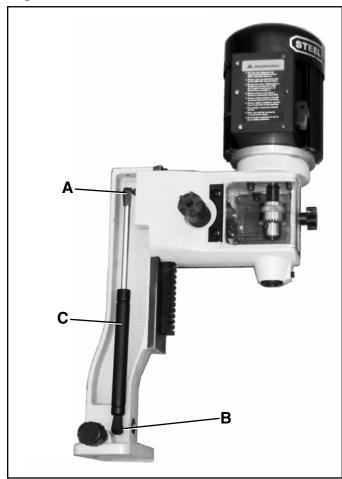
#### HYDRAULIC CYLINDER ASSEMBLY

#### **▲** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

1. Thread lower ball stud fitting into hole (B) in the column of the Mortiser. **SEE FIG. 5** 

Fig. 5



- 2. Snap the hydraulic cylinder (C) over the upper ball stud fitting (A) on the back of the Mortiser head.
- Attach the other end of the hydraulic cylinder to the lower ball stud fitting installed in step 1.

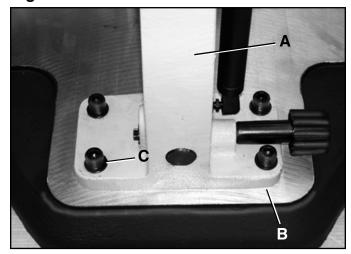
#### **BASE ASSEMBLY**

#### **A** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

1. Place mortiser column (A) over the base (B), aligning the four holes in the mortiser column with the four holes in the base. **SEE FIG. 6.** 

Fig. 6



Insert four M8 socket head cap screws (C) with washers and lockwashers through the column. Thread into base and tighten.

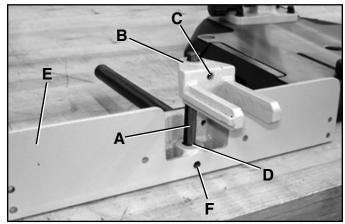
#### **FENCE ASSEMBLY**

#### **▲** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

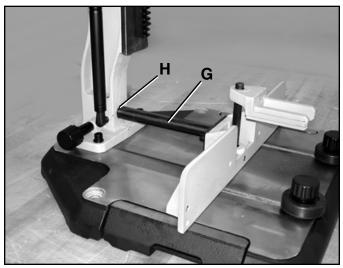
 Insert guide rod (A) through hole in hold down (B) and tighten set screw (C) using supplied hex wrench. SEE FIG. 8.

Fig. 8



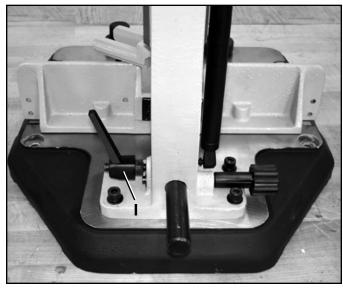
- 2. Insert guide rod into hole (D) of fence assembly (E) and tighten set screw (F) using supplied hex wrench.
- 3. Insert fence guide shaft (G) through hole (H) in column of the mortiser. **SEE FIG. 9.**

Fig. 9



4. Thread fence lock handle (I) into the column of the mortiser. Place flat washer over the shaft and secure with phillips head screw. Tighten to secure fence, **SEE FIG. 10.** 

Fig. 10



**NOTE:** Fence lock handle is spring loaded and can be repositioned by pulling out on the handle and rotating it.

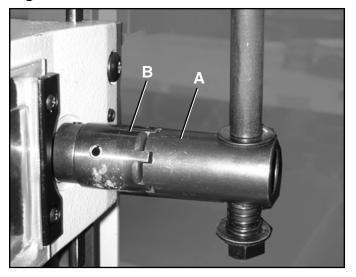
#### RAISING/LOWERING HANDLE

#### **▲** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

1. Line up the notches in the hub on the handle (A) with the slots in the gear shaft (B). **SEE FIG. 11.** 

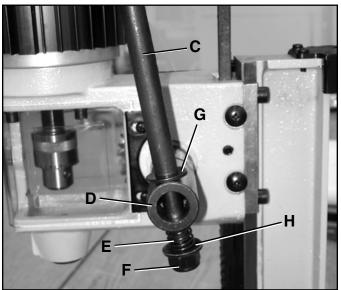
Fig. 11



**NOTE:** The handle may be attached to either the left side or the right side, depending on your preference.

 Insert handle (C) with flat washer (G) installed through the hub (D). Place spring (E) over the handle. Place the second flat washer (H) on the handle and thread hex nut (F) onto the handle.
 SEE FIG. 12.

Fig. 12



**NOTE:** The handle is spring loaded. You can reposition it by pulling it out and repositioning it on the gear shaft.

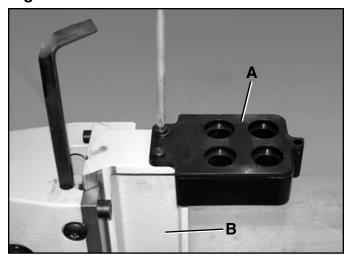
#### **TOOL AND CHISEL HOLDER**

#### **A** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

Place tool and chisel holder (A) on top of column (B) and align with mounting holes. Using two screws and two washers provided, tighten holder to top of column. **SEE FIG. 13.** 

Fig. 13



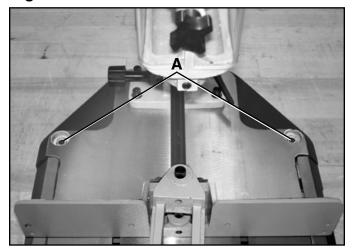
# FASTENING MACHINE TO SUPPORTING SURFACE

#### **WARNING**

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

If during operation there is any tendency for the mortiser to tip over, slide, or walk on the supporting surface, the base must be secured to the supporting surface with fasteners (not supplied), through the two holes (A) located in the mortiser base. **SEE FIG. 14.** 

Fig. 14



#### **INSTALLING CHISEL AND BIT**

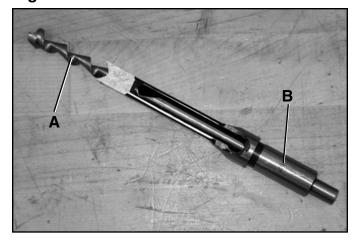
#### **▲** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

CHISELS ARE VERY SHARP AND CAN CAUSE A SERIOUS CUT. TAKE EXTREME CAUTION WHEN HANDLING CHISELS.

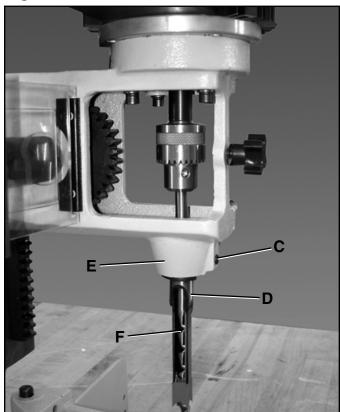
1. Insert bit (A) into chisel (B). SEE FIG. 15.

Fig. 15



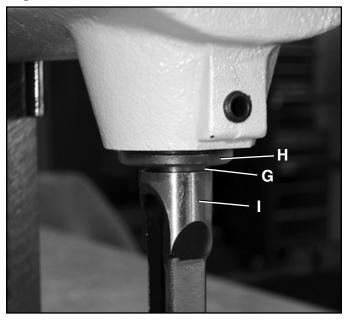
2. Loosen set screw (C) and push chisel (D) up through hole in head (E) as far as possible, making sure that the opening in the chisel (F) is facing left or right. **SEE FIG. 16.** 

Fig. 16



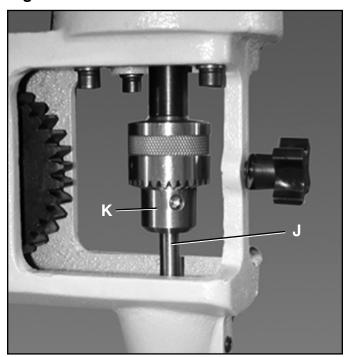
3. Lower chisel 1/16" to 3/16" and tighten set screw. There must be a space of 1/16" to 3/16" clearance (G), about the thickness of a dime, between the bushing (H) and shoulder of chisel (I). This assures having proper clearance between the cutting edges of the bit and points of the chisel after the bit is inserted into the chuck. **SEE FIG. 17.** 

Fig. 17



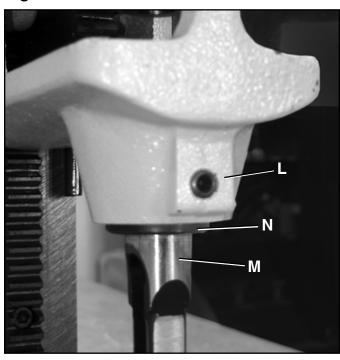
 Push bit (J) up through the chisel and into the chuck (K) until the bottom of the bit is flush with the bottom of the chisel. Lock bit into the chuck using the supplied chuck key. SEE FIG. 18.

Fig. 18



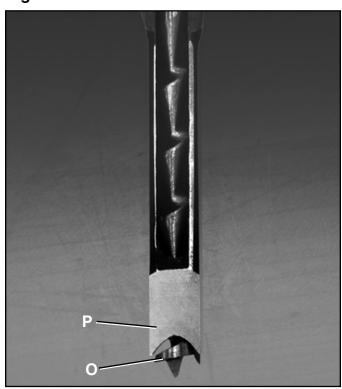
 Loosen set screw (L), push chisel (M) up against the bottom of bushing (N) and tighten set screw.
 This should provide the proper distance between the cutting edges of the bit and points of the chisel.
 SEE FIG. 19.

Fig. 19



6. The flat portion of the bit (O) should now be adjusted to a minimum of 1/16" below the bottom of the chisel (P). For certain types of wood it may be necessary to increase this distance to a maximum of 3/16" clearance. **SEE FIG. 20.** 

Fig. 20

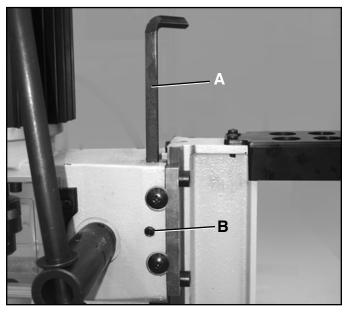


## **ADJUSTMENTS**

#### **DEPTH STOP ROD**

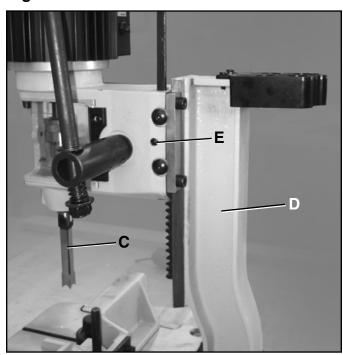
The depth stop rod is provided to limit the cutting depth of the chisel. To adjust the depth stop rod (A), loosen set screw (B). **SEE FIG. 23.** 

Fig. 23



1. Lower head until the cutting chisel (C) is at the desired depth. **SEE FIG. 24.** 

Fig. 24



- 2. Lower depth stop rod until it contacts the top of the column (D).
- 3. Tighten set screw (E).

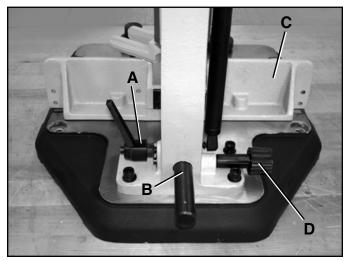
#### **FENCE**

The fence can be moved in or out to accommodate various size workpieces.

#### To move fence:

- 1. Loosen fence lock handle (A) until the fence glide shaft (B) can move freely. **SEE FIG. 25.**
- 2 Slide fence (C) in or out to the desired position.
- 3. Tighten fence lock handle to secure fence.

Fig. 25



#### **MICRO-ADJUST ASSEMBLY**

Sometimes it is necessary to move the fence in small increments. When this is the case, the micro-adjust assembly should be used.

- Loosen the fence lock handle (A) so that the fence
   (C) may slide smoothly. SEE FIG. 25.
- Rotate the adjustment knob (D) clockwise to move the fence in towards the mortiser column. Rotate counterclockwise to move the fence away from the mortiser column.

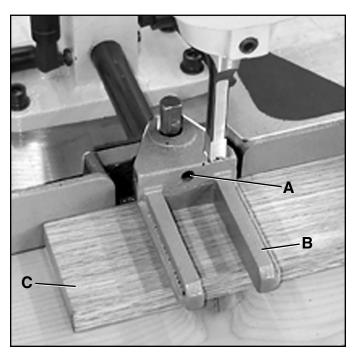
#### **HOLDDOWN**

The purpose of the holddown is to prevent the workpiece from lifting as the chisel is raised up.

To adjust: Loosen set screw (A), position holddown (B) until it just touches the top of the workpiece (C) and allows the workpiece to slide left or right. Once holddown is in position, retighten set screw. **SEE FIG. 26.** 

**NOTE:** The holddown can also be turned upside down to accommodate thicker workpieces. When doing this, tighten the set screw on the back side of the holddown. **SEE FIG. 26.** 

Fig. 26



# SETTING CHISEL SQUARE TO FENCE

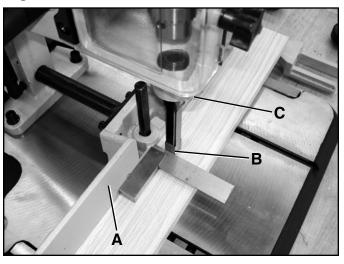
#### **▲** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

Checking that chisel is square to fence:

- Place a square against the face of the fence (A).
   SEE FIG. 27.
- 2. Check to see if left side of chisel (B) is square to the face of the fence.
- 3. If not square, loosen set screw (C) and reposition chisel until the left side of the chisel is flat against the square.
- 4. Retighten set screw.

Fig. 27

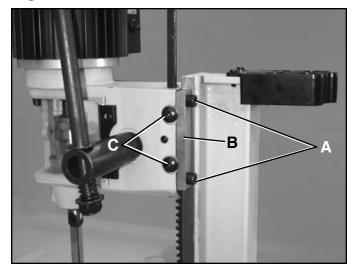


# SLIDING FIT BETWEEN HEAD AND COLUMN

A dovetail gib is provided on the rear of the head to insure a good sliding fit between the head and the column when the head is raised and lowered. This should be set at the factory and should not need adjustment. If adjustment is necessary, perform the following steps.

1. Loosen two socket head cap screws (A) in the dovetail gib (B) only slightly (less than 1/8 turn) using provided hex wrench. **SEE FIG. 28.** 

Fig. 28



2. Turn adjusting screws (C) clockwise to make a tighter fit, turn counterclockwise for a looser fit.

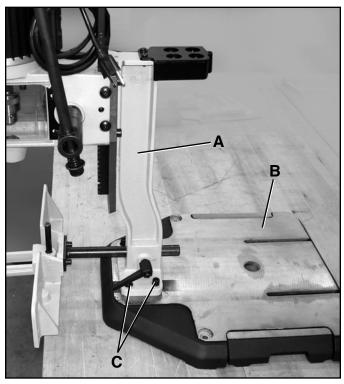
**NOTE:** Correct adjustment is when a good snug sliding fit is obtained without any side movement between the gib and the column. This adjustment should not be too tight that it restricts the sliding movement or too loose that it affects accuracy.

3. Once proper fit is achieved, retighten the two socket head cap screws.

#### **ROTATING COLUMN 180 DEGREES**

Sometimes a workpiece may be too large to fit between the base and the chisel. When this is the case, you can rotate the column of the mortiser 180 degrees, as shown, and perform the work off of a bench or floor.

Fig. 29



#### **A** WARNING

When rotating column 180 Degrees, you **MUST** fasten the machine to a supporting surface. See FASTENING MACHINE TO SUPPORTING SURFACE in the ADJUSTMENTS section of this manual.

- 1. To rotate the column, remove the four M8 socket head cap screws (C) that bolt the mortiser column (A) to the base (B). **SEE FIG. 29.**
- 2. Rotate column 180 degrees.
- 3. Replace four M8 socket head cap screws (C).

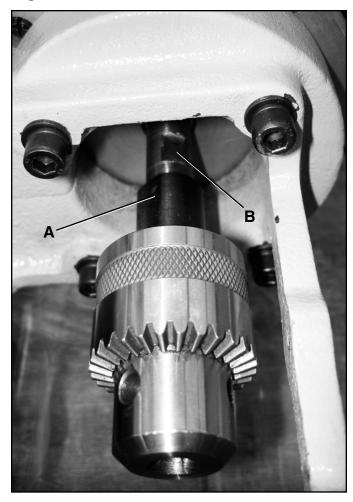
# USING BITS WITH EXTRA LONG SHANKS

When using bits with extra long shanks, it will be necessary to remove the extension.

#### **A** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE.

Fig. 30



- 1. Remove the mortising bit.
- 2. Place one open end wrench on the flats of the extension (A) and one open end wrench on the flats of the motor shaft (B) (wrenches not supplied).
- 3. Unscrew the extension and chuck from the motor shaft.
- 4. Remove the chuck from the extension.
- 5. Reinstall the chuck to the motor shaft. Tighten securely.

## **OPERATIONS**

#### **▲** WARNING

MAKE CERTAIN THAT THE MORTISER IS DIS-CONNECTED FROM THE POWER SOURCE. When the tool is not in use, the tool should be locked in the OFF position to prevent unauthorized use. This can be done by placing a padlock (not provided) through the hole in the green button.

#### **A** WARNING



**ALWAYS** wear eye protection. Any machine can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are **NOT** safety glasses. **ALWAYS** wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.

# **▲** WARNING

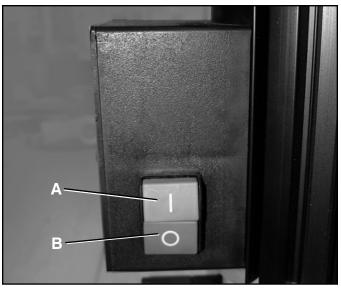


**ALWAYS** wear a NIOSH/OSHA approved dust mask to prevent inhaling dangerous dust or airborne particles.

#### **ON/OFF SWITCH**

The switch is located on the side of the motor. To turn the machine on, push the green button (A). To turn the machine off, push the red button (B). **SEE FIG. 31.** 

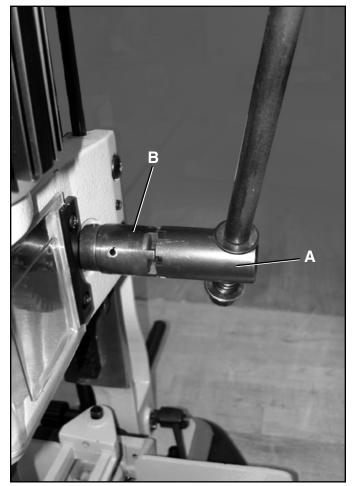
Fig. 31



# RAISING AND LOWERING THE HEAD

The head is raised and lowered by using the handle. For maximum leverage during the mortising operation, the handle can be repositioned by pulling out the hub (A) of the handle assembly and repositioning hub on the pinion shaft (B). **SEE FIG. 32.** 

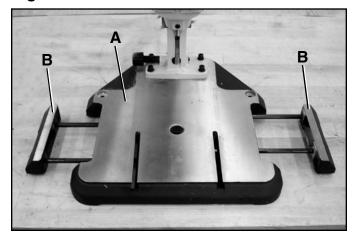
Fig. 32



#### **EXTENSION WINGS**

The mortiser base (A) is equipped with two extension wings (B), one on each side of base. They are used when working with longer workpieces, to add stability to the operation. **SEE FIG. 33.** 

Fig. 33

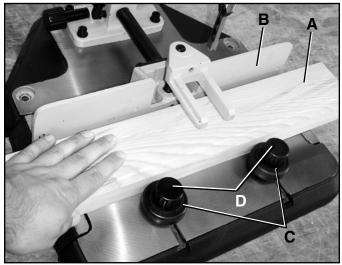


#### STOCK ROLLERS

The stock rollers are a convenience feature that helps keep the workpiece pressed firmly against the fence. To set up:

1. Press workpiece (A) firmly up against the fence (B). **SEE FIG. 33A**.

Fig. 33A



- Loosen stock rollers (C) by turning each knob (D) counterclockwise.
- 3. Slide the stock rollers so that they are pressed firmly up against the workpiece.
- 4. Tighten the knobs on the stock rollers by turning them clockwise.

**NOTE:** Make sure that the rollers are pressed against the workpiece firmly enough to keep it from pulling away from the fence, but not so tight that the workpiece cannot slide freely from left to right.

#### **USING AUXILIARY WOOD FENCE**

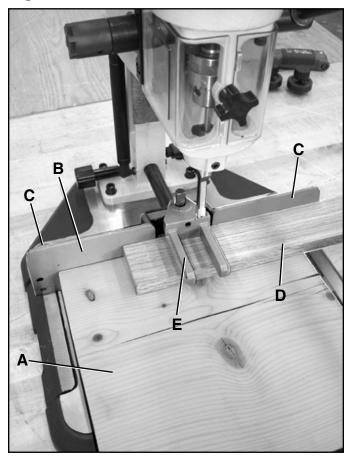
When mortising an extra high workpiece, an auxiliary fence can be fastened to the fence with wood screws (not provided) through the holes in the fence. This provides additional support for the workpiece during mortising operation.

#### **USING SACRIFICIAL BOARD**

When performing a through mortise, it is a good practice to use a sacrificial board to prevent any chipout at the bottom of the mortise.

1. To attach a sacrificial board, place sacrificial board (A) against the face of the fence (B). **SEE FIG. 34.** 

Fig. 34



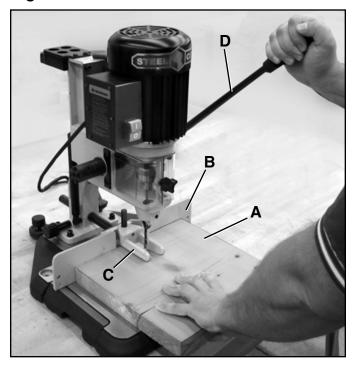
- 2. Attach sacrificial board to fence using wood screws (not provided) though the holes of the fence (C).
- 3. Place workpiece (D) on top of sacrificial board and up against the fence.
- 4. Fasten workpiece using the holddown (E).

NOTE: When using sacrificial board, **DO NOT** use the stock rollers.

#### **OPERATING THE MORTISER**

1. Make sure that the workpiece (A) is held firmly against the fence (B) when cutting and that the holddown (C) is properly adjusted. **SEE FIG. 35.** 

Fig. 35



2. Using the Raise/Lower handle (D), lower the chisel until it penetrates the workpiece.

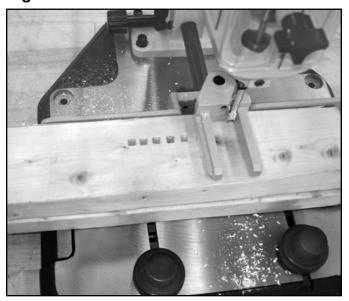
**NOTE:** The rate of penetration of the chisel must be fast enough to prevent burning at the tip of the bit, but not too fast as to stall the motor.

**NOTE:** You may encounter smoke from the bit or material once the chisel has engaged the material. The smoke created is a natural operating occurrence in hollow chisel mortising and is caused by material chip friction and the resins in the stock being burned off.

**NOTE:** Retract drill bit frequently during drilling operations to help clear chips from the hole.

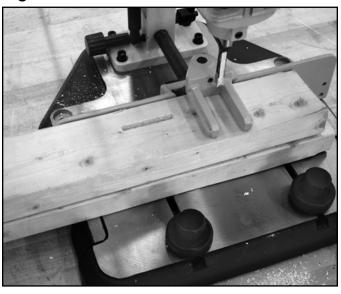
3. When making additional penetrations, leave a gap between the holes. **SEE FIG. 36.** 

Fig. 36



4. Once the desired length of the mortise is achieved, go back and chisel out the remaining gaps. This will ensure a smooth, clean mortise. **SEE FIG. 37.** 

Fig. 37



**NOTE:** A blue-tinted chisel is not indicative of a dull chisel, but a combination of friction and resin buildup on the cutting faces of the chisel. A dull chisel can be detected by the amount of excess force required to complete a cut.

#### **MAINTENANCE**

Repairs to this power tool should be performed by trained personnel only. Contact your nearest Steel City Service Center for authorized service. Unauthorized repairs or replacement with non-factory parts could cause serious injury to the operator and damage to your machine.

#### **A** WARNING

To prevent injury to yourself or damage to the machine, turn the switch to the "OFF" position and unplug the power cord from the electrical receptacle before making any adjustments.

The Mortiser will operate best if it is kept in proper operating condition. Keep unit adjusted as described in OPERATIONS AND ADJUSTMENTS.

- Turn the power switch "OFF" and unplug the power cord from its power source.
- Do not allow gum and pitch to accumulate on cutting tool.
- Do not allow chips to accumulate on or around the machine.
- Keep chisels and bits sharp. Keeping a spare set of chisels and bits on hand is recommended. Contact your Steel City Distributor for replacement parts.

#### **A** WARNING

**DO NOT USE FLAMMABLE MATERIALS** to clean this machine. A clean dry rag or brush is all that is needed to remove dust and debris buildup.

# PROTECTING CAST IRON TABLE FROM RUST

#### **A** WARNING

**MAKE CERTAIN** to turn the switch "OFF" and unplug the power cord from its power source.

The environment and frequency of human contact can have a very detrimental impact on unpainted cast iron surfaces. Moisture, humidity and oils (from human hands!) can cause the unpainted cast iron surfaces to mar or rust, so it is important to conduct routine maintenance to keep your mortiser looking new. Cleaning and waxing the cast iron surfaces on a regular maintenance schedule is recommended as follows:

To clean and maintain the unpainted cast iron surfaces:

- Apply a heavy coat of WD-40 onto the unpainted cast iron surface.
- Use a fine steel wool pad to buff the unpainted cast iron. Make sure to buff in a "front to rear" direction only. A side-to-side buffing motion will show in the finely ground cast iron as a flaw, defect or scratches.
- Reapply WD-40 and buff the unpainted cast iron surfaces until the stain is removed. Make sure you use the same front-to-rear buffing direction to avoid scratching or marring the cast iron surface.
- After all stains and/or rust have been removed, clean all oil and dirt from the surface using a soft cloth or rag.
- Lastly, you need to apply a good automotive paste wax to all unpainted cast iron surfaces. This will help to protect the surface from rusting from further contact with moisture or oily hands.

#### **LUBRICATION**

The Mortiser has sealed lubricated bearings in the motor housing that do not require any additional lubrication from the operator.

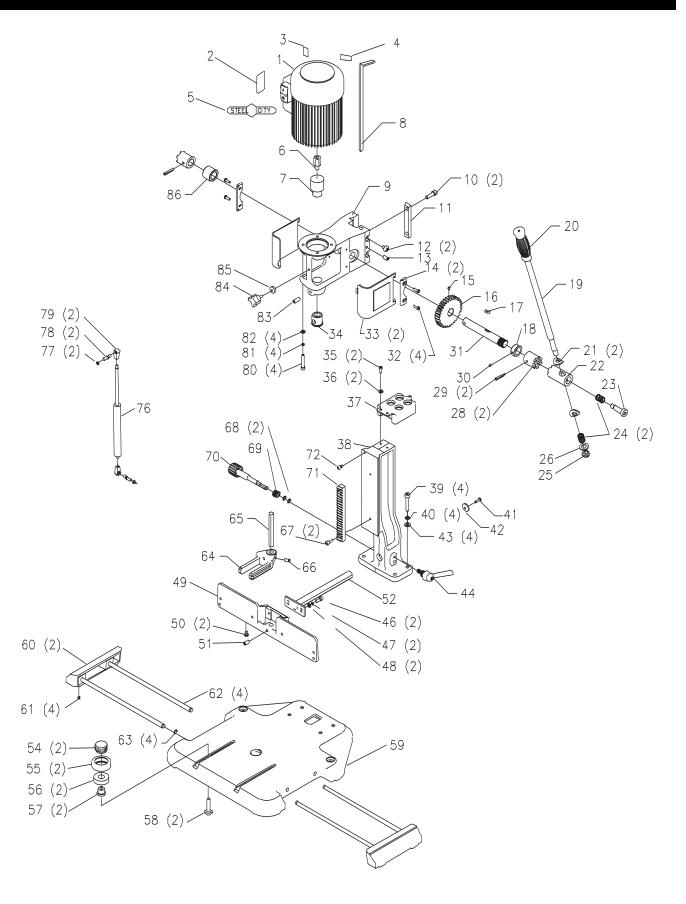
- Fence guide and elevation screws should be cleaned of debris and greased as needed.
- Occasionally apply a few drops of light machine oil to gibs to keep tables free in relation to base.

## TROUBLESHOOTING GUIDE

**TO PREVENT INJURY TO YOURSELF** or damage to the mortiser, turn the switch to the OFF position and unplug the power cord from the electrical receptacle before making any adjustments.

PROBLEM	LIKELY CAUSE(S)	SOLUTION
Motor does not start or does not	Defective switch	Have switch replaced.
come up to full	2. Defective capacitor	2. Have capacitor replaced.
speed	3. Low line voltage	Correct low line voltage condition. If machine is plugged into an extension cord, disconnect and plug directly into wall outlet.
	4. Defective motor	Have motor replaced.     NOTE: 2, 3, and 4 must be done by a qualified service technician; Consult Steel City Tool Works service.
Motor stalls or	Circuit overload	Reduce circuit load (turn off other appliances).
circuit breakers open frequently	2. Low line voltage	Correct low line voltage condition. Check line voltage with a multi-meter. If mortiser is plugged into an extension cord, unplug mortiser from extension cord and plug mortiser directly to wall outlet.
	3. Motor overload	3. Reduce load on motor, slow down feed rate.
	4. Incorrect fuses on circuit breakers	Have correct fuses on circuit breakers installed by a qualified electrician.
	Short circuit in motor; loose connections or worn insulation on lead wires.	Inspect terminals in motor for damaged insulation and shorted wires and have them replaced. Check all power lead connections.
Motor running too hot	Restricted air circulation due to dust accumulation.	Clean dust and restore normal air circulation around motor.
	2. Motor overload	2. Reduce load on motor, slow down feed rate.
Drill bit stalls or slips	Drill bit is not securely tightened in chuck.	Install drill bit properly. See ASSEMBLING CHISEL AND BIT in ASSEMBLY INSTRUCTIONS.
Drill bit or material smokes or burns	Chips not exiting out of drill hole.	Retract drill bit frequently during drilling operation to clear chips from hole.
	2. Dull drill bit.	2. Replace or sharpen drill bit.
Excessive drill bit runout or wobble	Bent drill bit.     Drill bit not properly installed in chuck.	Replace with a straight or new drill bit.     Install drill bit properly. See ASSEMBLING CHISEL AND BIT in ASSEMBLY INSTRUCTIONS.

## **PARTS**



KEY NO.	PART NO.	DESCRIPTION	QTY.	KEY NO.	PART NO.	DESCRIPTION	QTY.
1	OR71540	Motor Assy. Inc. Ref. 2,3,4,5	1	51	OR93378	M8X10 Set Screw Hex Soc	1
2	OR71541	Warning Label	1	52	OR71567	Fence Glide	1
3	OR71542	Spec Label	1	53	OR71570	Stock Roller Assy. Inc Ref. 54,55,56,57,58	
4	OR71543	Motor Label	1	54	OR71571	Knob	2
5	OR71544	Logo Label	1	55	OR71572	Rubber Wheel	2
6	OR71545	Link Shaft	1	56	OR71573	Bush 2	2
7	OR71546	3/8" Chuck	1	57	OR71574	Bush 1	2
8	OR71547	Dpth Stop Rod	1	58	OR71575	M8X35 T-Screw	2
9	OR71548	Head	1	59	OR71576	Base	1
10	OR93381	M8X20 Hex Soc Hd Scr	2	60	OR71577	Extension Base	2
11	OR71549	Guide	1	61	OR90222	M6X10 Set Screw Hex Soc	4
12	OR94172	M8X10 Pan Screw	2	62	OR71578	Extension Bar	4
13	OR91821	M8X20 Set Screw Hex Hd	1	63	OR94179	8 Open Retaining Ring	4
14	OR71550	Hinge	2	64	OR71579	Hold down	1
15	OR91764	M5X10 Set Screw Skt Hd	1	65	OR71580	Guide Rod	1
16	OR71551	Gear	1	66	OR93378	M8X10 Set Screw Hex Soc	1
17	OR94051	5X5X12 Key	1	67	OR93951	M6 x 16mm Hex Soc Set Scr	2
18	OR71552	Place Ring	1	68	OR94180	6 Open Retaining Ring	2
19	OR71553	Handle Shaft Inc. Ref. 20	1	69	OR71581	Gear	1
20	OR71554	Handle	1	70	OR71582	Adjust Knob	1
21	OR94173	12 Saddle-Backed Washer	2	71	OR71583	Rack	1
22	OR71555	Handle Joint	1	72	OR90222	M6X10 Hex Soc Set Screw	1
23	OR94174	Rotation Shaft Bolt	1	75	OR71584	Stabilizer Cylinder Assy. Inc Ref. 76,77,78,79	•
24	OR94175	Spring	2	76	OR93346	Stabilizer Cylinder	1
25	OR94176	M12 Hex Hd Nut Skt	1	77	OR90758	M6 Hex Hd Nut Thin	2
26	OR90304	12 Flat Washer	1	78	OR93348	Junction Screw	2
28	OR71556	Gear Shaft Joint	2	70 79	OR93347	Ball Stud	2
29	OR94183	6X32 Spring Pin	2	80	OR93377	M6X45 Hex Soc Hd Scr	4
30	OR93906	M5X6 Set Screw Skt Hd	1	81	OR90502	6 Lock Washer	4
31	OR71557	Gear Rod	1	82	OR90059	6 Flat Washer	4
32	OR90505	M5X12 Pan Screw	4	83	OR91821	M8X20 Set Screw Hex Hd	1
	OR71558	Cover	2	84	OR94181		1
33 34	OR71559		1	85	OR94182	Clamp Knob	1
35	OR90505	Bushing M5X12 Pan Screw	2	86	OR71585	6 Nylon Washer Washer	1
36	OR90462	5 Flat Washer	2	87	OR71586		· ·
37	OR71560	Chisel Holder	1	07	OH/ 1560	Chisel and Drill Bit Assy. Inc. Ref. 88,89,90,91 (NOT SHOWN)	
38	OR71561	Column	1	88	OR71587	1/4" Chisel and Drill Bit Assy.(NOT SHOWN)	1
		M8X35 Hex Soc Hd Screw	1	89	OR71588	5/16" Chisel and Drill Bit Assy.(NOT SHOWN)	1
39	OR94177		4	90	OR71589	3/8" Chisel and Drill Bit Assy. (NOT SHOWN)	1
40	OR90248	8 Lock Washer	4	91	OR71590	1/2" Chisel and Drill Bit Assy. (NOT SHOWN)	1
41	OR90761	M5X10 Pan Hd Screw	1	92	OR71591	4MM Hex Wrench (NOT SHOWN)	1
42	OR90462	5 Flat Washer	1	93	OR71592	6MM Hex Wrench (NOT SHOWN)	1
43	OR90311	8 Flat Washer	4	94	OR71593	Instruction Manual (NOT SHOWN)	1
44	OR94178	Lock Handle (M8X21)	1	95	OR71594	Instruction Manual, Spanish (NOT SHOWN)	1
45	OR71566	Fence Assy. Inc. Ref. 46,47,48,49,50,51,52	•	96	OR71595	Instruction Manual, French (NOT SHOWN)	1
46	OR93373	M6X16 Hex Soc Hd Scr	2	97	OR93352	Chuck Key (NOT SHOWN)	1
47	OR90502	6 Lock Washer	2			• • • • • • • • • • • • • • • • • • • •	1
48	OR90059	6 Flat Washer	2	98	SC10547	T-Handle (NOT SHOWN)	1
49	OR71569	Fence	1				
50	OR71596	Fence Glide Pad	2				



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